

**WHAT IS CLAIMED IS:**

1. A method of evaluating a protein kinase C (PKC) activity in a tissue other than monocytes of a subject, the method comprising:
  - evaluating the level of the PKC activity in monocytes of the subject,
  - the level of PKC activity in the monocytes being correlated to the level of PKC activity in a tissue other than monocytes.
2. The method of claim 1, wherein the PKC activity is PKC  $\beta$  activity.
3. The method of claim 1, wherein the tissue is cardiovascular tissue.
4. The method of claim 3, wherein the cardiovascular tissue is retinal, kidney or aorta vascular tissue or heart.
5. The method of claim 1, wherein the subject is a human.
6. The method of claim 1, wherein the subject is an experimental animal.
7. A method of determining if a subject is at risk for or has a PKC related disorder, the method comprising:
  - evaluating the level of PKC activity in monocytes of the subject;
  - optionally comparing the level of the PKC activity in monocytes of the subject with a standard,
  - thereby determining if the subject has a symptom of a PKC related disorder.
8. The method of claim 7, wherein the PKC activity is PKC  $\beta$  activity.
9. The method of claim 7, wherein the disorder is diabetes.
10. The method of claim 7, wherein the disorder is diabetic retinopathy.

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- 32 11. The method of claim 7, wherein the disorder is diabetic nephropathy.
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- 34 12. The method of claim 7, wherein the disorder is a cardiovascular disorder.
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- 36 13. The method of claim 7, wherein the subject is a human.
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- 38 14. The method of claim 7, wherein the subject is an experimental animal.
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- 40 15. The method of claim 7, wherein the disorder is selected from the group consisting of:
- 41 *Sub A4* *conc.* diabetes mellitus, Type I diabetes, Type II diabetes, diabetic retinopathy, proliferative diabetic
- 42 retinopathy, non-proliferative diabetic retinopathy, diabetic nephropathy, microalbumiuria,
- 43 proteinuria, renal failure, hypertension, atherosclerosis, coronary artery spasm, congestive heart
- 44 failure, coronary artery disease, valvular disease, arrhythmias, and cardiomyopathy.
- 45
- 46 16. A method of evaluating a subject for the extent, stage, or severity, of a PKC related
- 47 disorder comprising:
- 48 evaluating the level of PKC activity in monocytes of the subject; and
- 49 optionally comparing the level of the PKC activity in monocytes of the subject
- 50 with a standard,
- 51 the level of PKC activity being correlated with the extent, stage, or severity, of the
- 52 PKC related disorder.
- 53
- 54 17. The method of claim 16, wherein the disorder is diabetes.
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- 56 18. The method of claim 16, wherein the disorder is a cardiovascular disorder.
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- 58 19. The method of claim 16, wherein the disorder is diabetes mellitus, Type I diabetes,
- 59 Type II diabetes, diabetic retinopathy, proliferative diabetic retinopathy, non-proliferative
- 60 diabetic retinopathy, diabetic nephropathy, microalbumiuria, proteinuria, renal failure,

hypertension, atherosclerosis, coronary artery spasm, congestive heart failure, coronary artery disease, valvular disease, arrhythmias, or cardiomyopathy.

20. The method of claim 16, wherein the PKC activity is PKC  $\beta$  activity.

21. The method of claim 16, wherein the subject is a human.

22. The method of claim 16, wherein the subject is an experimental animal.

23. A method of evaluating the effect of a treatment for a PKC related disorder on a subject comprising:  
administering a treatment for a PKC related disorder to a subject; and  
evaluating the level of a PKC activity in monocytes of the subject, thereby evaluating the effect of the treatment.

24. The method of claim 23, wherein the disorder is diabetes.

25. The method of claim 23, wherein the disorder is a cardiovascular disorder.

26. The method of claim 23, wherein the disorder is diabetes mellitus, Type I diabetes, Type II diabetes, diabetic retinopathy, proliferative diabetic retinopathy, non-proliferative diabetic retinopathy, diabetic nephropathy, microalbumiuria, proteinuria, renal failure, hypertension, atherosclerosis, coronary artery spasm, congestive heart failure, coronary artery disease, valvular disease, arrhythmias, or cardiomyopathy.

27. The method of claim 23, wherein the PKC activity is PKC  $\beta$  activity.

28. The method of claim 23, wherein the subject is a human.

29. The method of claim 23, wherein the subject is an experimental animal.

30. A method of identifying a compound for the treatment of a PKC related disorder in a subject, the method comprising:

administering a test compound for the treatment of the disorder to the subject; and  
evaluating a PKC activity in monocytes of the subject,  
the level of PKC activity being correlated with the effect of the treatment on the  
disorder.

31. The method of claim 30, wherein the disorder is diabetes.

32. The method of claim 30, wherein the disorder is a cardiovascular disorder.

33. The method of claim 30, wherein the PKC related disorder is diabetes mellitus, Type I diabetes, Type II diabetes, diabetic retinopathy, proliferative diabetic retinopathy, non-proliferative diabetic retinopathy, diabetic nephropathy, microalbuminuria, proteinuria, renal failure, hypertension, atherosclerosis, coronary artery spasm, congestive heart failure, coronary artery disease, valvular disease, arrhythmias, or cardiomyopathy.

34. The method of claim 30, wherein the PKC activity is PKC  $\beta$  activity.

35. The method of claim 30, further comprising:  
optionally identifying a subject in need of a treatment for the disorder;  
optionally evaluating a PKC activity in monocytes of the subject; and  
comparing the PKC activity before the administration of the test compound to the  
PKC activity after administration of the test compound,  
wherein a compound for the treatment of the disorder is identified when the PKC  
activity after the administration of the compound is altered compared to a standard.

36. The method of claim 30, wherein the subject is a human.

37. The method of claim 30, wherein the subject is an experimental animal.

123 38. A method of identifying a compound for the treatment of aging or an aging-related  
124 disorder in a subject, the method comprising:

125 administering a test compound for the treatment of aging or an aging-related  
126 disorder to the subject; and

127 evaluating a PKC activity in monocytes of the subject,  
128 the level of PKC activity being correlated with the effect of the treatment on the  
129 disorder.

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131 39. A method of evaluating the effect of a treatment for aging or an aging-related  
132 disorder on a subject comprising:

133 administering a treatment for aging or an aging-related disorder to a subject; and

134 evaluating the level of a PKC activity in monocytes of the subject, thereby evaluating the  
135 effect of the treatment.